California Regional Water Quality Control Board Santa Ana Region January 23, 2002 (Board Meeting Date) (November 15, 2001 Draft)

ITEM: 8

SUBJECT: Order No. R8-2002-0014, Waste Discharge Requirements for

Sewage Collection Agencies in Orange County Within the Santa

Ana Region

INTRODUCTION:

There is a significant public health threat from the microbial pollution problems in ocean waters along the Orange County coast. Orange County has some of the most valuable beaches in the country, not only because of the large number of visitors, but also because of the revenue these visitors generate for the local businesses and the municipalities. From Seal Beach to San Clemente, there are approximately 42 miles of coastal beaches and a total of 124 miles of coastal and bay beaches. This translates to 45,260 available beach mile days per year (beach mile days=miles of beach X number of days). Approximately 60% of the beach mile days in Orange County are within the Santa Ana Region, with the remainder in the San Diego Region.

Since 1999, there have been a total of 146.8 beach mile days of beach water postings (warning) and closures (access prohibited) in Orange County. Between January 1, 2000 and August 31, 2001, the Orange County Health Officer closed portions of Seal Beach, Sunset Beach, Bolsa Chica State Beach, Huntington Harbour, Huntington City Beach, Huntington State Beach, Newport Beach, Newport Slough, and Newport Coast to body contact recreation on 31 occasions. All storm drain outlets into the ocean are posted, warning the public that the water may be contaminated. In addition, the Health Officer posts the area where testing indicates that the water quality objectives for bacteria are exceeded.

To date, studies have indicated that beach water closures and postings cannot be linked to any single source. There are a number of suspected or potential sources that cause water quality impairment of ocean waters in Orange County. These include sewage spills and leaks, urban runoff, Orange County Sanitation District's (OCSD) ocean outfall, AES power plant discharge, vessel pump out stations, septic systems, coastal wetlands and marshes and wildlife. However, the 31 beach water closures indicated above were all due to sewage spills or leaks that reached or threatened to reach ocean waters.

The Regional Board currently regulates urban runoff, OCSD's ocean outfall, and the AES power plant discharges. The sanitary system overflows (SSOs, sewage spills and leaks) are currently not regulated by the Regional Board. According to the United States Environmental Protection Agency (USEPA), "Final Report,

Sanitary Sewer Overflow (SSO) Workshop", August 1995, workshop participants agreed that most dry weather SSOs were preventable and can be eliminated, and most wet weather related SSOs can be significantly reduced by adequate management, operations, and maintenance programs. Where wet weather SSOs cannot be eliminated, cost-effective storage and treatment options are available.

Based on the finding that most beach water closures in Orange County are due to SSOs, and the fact that most of these SSOs are preventable, this order proposes to regulate all sewering agencies in Orange County that are within the Santa Ana Regional Board's jurisdiction. It is anticipated that upon implementation of the requirements specified in this order, beach water closures due to SSOs will be significantly reduced/eliminated.

BACKGROUND

During the summer of 1999, a 1 to 5 mile section of Huntington Beach was closed to body contact recreation. As part of the investigation of the possible causes of the beach water pollution, the Executive Officer issued a Cleanup and Abatement Order requiring the City of Huntington Beach to conduct an investigation of its sanitary sewers and to determine the impact of any leaking sewers on the microbial pollution problems in the ocean waters. The Cleanup and Abatement Order also required the City to develop and implement a plan for repairing leaking sewers throughout the City.

The City of Huntington Beach completed the investigation of the sewer system and concluded that the leaking sewers had not contributed to the beach water pollution problems at Huntington Beach, or adversely impacted ground water quality. However, these investigations and other similar studies indicated that sewage leaks and spills from deteriorated sewer lines and/or sewer lines that are not properly maintained could be a significant source of microbial contamination in the nearshore zone of the ocean.

There are 27 sewage collection agencies within the Santa Ana portion of Orange County. Many of these collection systems have had sewage spills that resulted in beach water closures. Table 1 below lists 31 SSOs that resulted in beach water closures, the cause of the spill, and the amount of the spill, the area impacted, and the responsible party. Over 100,000 gallons of sewage (excluding secondary treated wastewater) was spilled into nearshore ocean waters between January 2000 and August 2001. During the same period there were a total of approximately 250 sewage spills. Most of these spills did not result in a beach water closure; but many of the spills reached other surface water bodies within the Region.

| ļ | Date Closed | Date Opened | Ocean, Bay, Harbor Area Closed | Agency/Reason (PPO=Private Property Owner) | Amount Spilled* |
|-----|----------------|--|--|--|--|
| | 0.000 | | | (iii o i iii ato i i oportij o) | |
| 1. | 1/2/00 | 1/5/00 | Harbor Patrol Beach, China Cove & Rocky Point Beach, Newport Bay, Newport Beach | City of Newport Beach/Line Blockage | ~1500 gallons/sewage |
| 2. | 1/4/00 | 1/6/00 | Trinidad Beach and Westchester Docks, Huntington Harbour, Huntington Beach | Westchester Bay-Sea Gate Lagoons (PPO)/Line Blockage | Unknown/sewage |
| 3. | 1/7/00 | 1/11/00 | Arches Marina, Newport Bay, Newport Beach | Park Superior Health Care (PPO)/Line Blockage | ~240 gallons/sewage |
| 4. | 2/22/00 | 2/28/00 | San Gabriel River to 1/2 mile downcoast of the San Gabriel River, Seal Beach | Orange County Sanitation District/Line Blockage-possibly storm water surcharge | ~1000-10,000 gallons/ sewage |
| 5. | 3/19/00 | | | City of Seal Beach/Line Break | ~1500 gallons/sewage |
| 6. | 4/24/00 | 4/27/00 | San Gabriel River to 5 th Street, Seal Beach | City of Placentia/Line Blockage | ~84,000 gallons/sewage 63,000 gallons recovered |
| 7. | 5/4/00 | 5/7/00 | Bayshore Beach & Dover Shores Beaches (2 coves), Newport Bay, Newport Beach | City of Newport Beach/Line Blockage | ~1000 gallons/sewage ~200 gallons recovered |
| 8. | 5/9/00 | 5/11/00 | Talbert Channel to Orange Street, Huntington State Beach & Newport City Beach Huntington Beach & Newport Beach | Orange County Sanitation District/Pump Station Equipment Failure | ~5000 gallons/sewage |
| 9. | 6/9/00 | 6/13/00 | San Gabriel River mouth downcoast to Seal Beach Pier, Seal Beach | Orange County Sanitation District/Line Blockage | ~50,000 gallons/ sewage |
| 10. | 9/11/00 | 9/14/00 From Lido Island Bridge to 300 feet up bay of Lido Island Bridge along Lido Marina Village docks, Newport Bay, Newport Beach Lido Marina Village/Line Break at Vessel Pump Out Facility | | Lido Marina Village/Line Break at Vessel Pump Out Facility | Unknown/sewage |
| 11. | 9/20/00 | 9/22/00 | From west end of Balboa Bay Club Marina down bay through Bayshore's "Play Beach" and bay front, Newport Bay, Newport Beach | Balboa Bay Club/Line Blockage - possibly grease | ~500-700 gallons/ sewage |
| 12. | 11/13/0 | 11/15/00 | Harbor Marina, Newport Bay, Newport Beach | PPO/Line Blockage | ~105 gallons/sewage |

| | 0 | 1 | | | |
|------|----------------|----------------|---|--|---|
| 13. | 12/7/00 | 12/10/00 | North Star Beach up bay to Jamboree Road, Newport Bay | Irvine Ranch Water District/Line Break | 250,000 gal. secondary |
| Tabl | e 1: Ocear | n, Bay and F | larbor Water Closures January 2000-August 2001 (Monica | a Mazur, OCHCA August 2001) | |
| | Date Closed | Date Opened | Ocean, Bay, Harbor Area Closed | Agency/Reason | Amount Spilled* |
| 14. | 12/11/0 0 | 12/14/00 | "A" Dock and Harbor Patrol Dock, Sunset Aquatic Marina, Anaheim Bay, Seal Beach | Sunset Aquatic Marina (PPO)/Line Break | X ~5months/sewage |
| 15. | 12/28/0 0 | 12/31/00 | North Star Beach, Newport Bay, Newport Beach | City of Newport Beach/Line Blockage | 500-600 gallons/ sewage |
| 16. | 2/14/01 | 2/17/01 | 300 feet up coast and 300 feet downcoast of the Santa Ana River, Huntington State Beach, Huntington Beach & Newport Beach | PPO (Denny's Restaurant)/line blockage (grease & paper towels) | ~100-300 gallons / sewage |
| 17. | 2/20/01 | 2/25/01 | 1000 feet up coast and 1000 feet downcoast of the Santa Ana River, Huntington State Beach, Huntington Beach & Newport Beach | Costa Mesa Sanitary District/line blockage (grease) | ~1000 gallons/sewage |
| 18. | 2/21/01 | 2/25/01 | Newport Slough, Newport Beach | Orange County Sanitation District/ suspected line break | <500 gallons/sewage |
| 19. | 3/12/01 | 3/15/01 | 300 feet up bay and 300 feet down bay of the Bahia Corinthian Yacht Club, Newport Bay, Newport Beach | PPO (Newport Medical Building)/line blockage | ~1000 gallons spilled - ~700 gallons recovered/ sewage |
| 20. | 4/10/01 | 4/13/01 | 300 feet up coast and 300 feet downcoast of El Morro Creek, El Morro State Beach, Newport Coast | State Department of Parks and Recreation/line break | ~25 gallons/sewage |
| 21. | 5/12/01 | 5/16/01 | Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach | Anaheim Sheraton Hotel/line blockage | ~2400 gallons/sewage ~100 gallons recovered |
| 22. | 5/18/01 | 5/21/01 | Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach | City of Garden Grove/line break | ~13,000 gallons/sewage ~10,400 gallons |
| 23. | 5/29/01 | 6/1/01 | Balboa Bay Club "F"-"H" Docks & Orange Coast College Crew Docks, Newport Bay, Newport Beach | PPO (Balboa Bay Club)/line break (vessel pump station sewage line) | Unknown gallons/sewage |
| 24. | 6/9/01 | 6/12/01 | Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach | PPO/line blockage (grease) | ~1500 gallons/sewage |
| 25. | 6/27/01 | 6/30/01 | Balboa Yacht Club docks, Newport Bay, Newport Beach | PPO (Balboa Yacht Club)/line blockage | >200 gallons/sewage |
| 26. | 7/3/01 | 7/5/01 | San Gabriel River mouth to 4 th Street, Seal Beach | PPO ()/line blockage | ~9800 gallons/sewage ~1600 gallons |

| | | | | | recovered |
|------|----------------|---|---|--|----------------------|
| Tabl | 1 | † · · · · · · · · · · · · · · · · · · · | Harbor Water Closures January 2000-August 2001 (Monica | | |
| | Date Closed | Date Opened | Ocean, Bay, Harbor Area Closed | Agency/Reason | Amount Spilled* |
| 27. | 8/12/01 | 8/16/01 | Sunset Aquatic Park Marina, Admiralty Drive Channel, Peter's Landing Marina & 11 th Street Beach, Huntington Harbour, Huntington Beach | City of Huntington Beach/line break (force main) | ~2000 gallons/sewage |
| 28. | 8/12/01 | 8/16/01 | Mouth of San Gabriel River to 300 feet downcoast of San Gabriel River, Seal Beach | City of Fullerton/line blockage (grease) | ~6000 gallons/sewage |
| 29. | 8/23/01 | 8/26/01 | Harbor Patrol Beach, Newport Bay, Newport Beach | Orange County Public Facilities & Resources Department/line break at vessel holding tank pump out facility | <50 gallons/sewage |
| 30. | 8/24/01 | 8/29/01 | Crow's Nest Marina, Newport Bay, Newport Beach | PPO (Crow's Nest Marina)/line break at vessel holding tank pump out facility | <50 gallons/sewage |
| 31. | 8/30/01 | 1 | City Channel at Sea Harbor and Coral Cay at Marina Bay Drive, Huntington Harbour, Huntington Beach | PPO (Jewel Land Properties)/line blockage | ~500 gallons/sewage |
| | | | | + | |

^{*}Amount Spilled: amount spilled - amount recovered = release amount.

CAUSES FOR SEWER SYSTEM OVERFLOWS

Table 1, above, also shows some of the causes of the reported SSOs. The majority of the SSOs are caused by pipe blockages due to grease buildup, debris, and roots. Other causes include sewer line damage due to flood, manhole structure failures, vandalism, pump station failures, pipe breakage, inadequate capacity, power outages, contractor caused damages, inflow and infiltration, and sewer systems that are not properly designed, constructed, operated, and/or maintained.

COLLECTION SYSTEM EVALUATION CRITERIA

In determining whether a sewage collection system is properly operated and maintained, staff used a report prepared by the American Society of Civil Engineers (ASCE) for USEPA in June 2000 entitled, "Protocols for Identifying Sanitary Sewer Overflows". This report is based on a survey of 14 sewage collection agencies from across the country to evaluate sewage spills, causes of spills, and operations and maintenance practices. The 14 sewer systems surveyed were chosen because they had a reputation for having good operations and maintenance programs and a relatively low number of sewage spills. The agencies were surveyed to determine what each agency did to prevent sewage spills and to determine how they responded to spills.

Table 2, below, summarizes some of the data collected for the ASCE report including the average and the range for some of the survey parameters.

Table 2: Summary of Data Collected by ASCE (June 2000)

| Criteria | Average | Maximum | Minimum |
|--|---------|---------|---------|
| | | | |
| Population Density per/sq. mi. | 282.3 | 468.8 | 176.4 |
| Age of Collection System (%<30 yrs.) | 37.3 | 63 | 1.0 |
| Average Daily Flow, gcd | 170 | 297 | 86 |
| % of System >24 in. diameter | 10.9 | 40 | 0.5 |
| Mile Sewer/Pump Station | 84.7 | 316.7 | 3.4 |
| % System Industrial/commercial | 17.9 | 80 | 3 |
| SSO Wet Weather Events | | | |
| -Pipe Failures/100 miles of sewer/yr | 1.40 | 8.54 | 0 |
| -Manhole Overflows/100 miles/yr | 2.02 | 7.46 | 0 |
| -Basement backups/100 miles/yr | 4.76 | 30.28 | 0 |
| -Pump Station Failures/100 miles/yr | 0.34 | 1.64 | 0 |
| -Pump station failures/pump station/yr | 0.31 | 1.63 | 0 |
| SSO Dry Weather Events | | | |
| -Pipe Failures/100 miles/yr | 0.88 | 6.03 | 0 |
| -Manhole overflows/100 miles/yr | 2.14 | 7.46 | 0 |
| Basement backups/100 miles/yr | 2.3 | 17.01 | 0 |
| -Pump station failures/yr | 0.5 | 2.03 | 0 |
| Routine Maintenance Frequency | | | |
| -%cleaned/yr | 22.6 | 38.8 | 6.4 |
| -%root treated/yr | 5.2 | 34.7 | 0 |
| -Main stoppages cleared/100 miles/yr | 41.4 | 162.3 | 0 |
| -Services stoppages cleared/100 miles/ | 104.3 | 420.0 | 0 |
| -Pump Station Service/PS/yr | 141.0 | 443.5 | 0 |
| -Monitoring sites/100 mi./yr | 12.0 | 62.5 | 0.4 |
| -% manhole inspected/yr | 15.5 | 48.5 | 0.1 |
| -Dye test/100 miles/yr | 5.9 | 30.3 | 0.8 |
| -% CCTV Inspected/yr | 0.4 | 1.9 | 0.1 |
| | | | |

As part of an investigation to determine the causes of the sewage spills in Orange County, staff conducted audits of a number of sewage collection agencies within Orange County. Staff evaluated the operations, management, capacity, reporting procedures, spill response procedures, and maintenance records of the sewage collection agencies audited for this purpose. The investigations indicated that there were sewage spills that were not properly reported by some of the sewage collection agencies. These results were then compared to the ASCE criteria.

SEWAGE COLLECTION AGENCIES IN ORANGE COUNTY

The OCSD is the major sewage collection agency in Orange County. The OCSD owns and operates two sewage treatment plants, one in Fountain Valley and the second one in Huntington Beach. Some of the treated water from the OCSD facility is further treated at the Orange County Water District's Water Factory 21 and reinjected to create a seawater intrusion barrier. The remaining treated water from the sewage treatment plants is discharged through an ocean outfall located approximately 4.2 miles from shore at Huntington Beach. The Irvine Ranch Water District (IRWD) operates a sewage treatment plant in Irvine. Other agencies listed below only operate sewage collection systems. Except for El Toro Water District, all other sewage collection systems listed below are tributary to the OCSD system.

Table 3, below, lists each of the sewage collection agencies in Orange County within the Santa Ana Region, and some basic characteristics of each system, such as the population served, service area, miles of sewers, etc. OCSD operates major trunk line sewers throughout each service area that collects sewage from each system for treatment at their two treatment plants. The agencies listed in Table 3 collect approximately 240 million gallons per day of wastewater, from over 2 million people, spread over more than 460 square miles. The size of the sewage collection systems range from a service population of 4,000 to more than 300,000 people, and from less than 3 miles of sewers to more than 500 miles of sewers. The entire sewage collection system includes almost 5,000 miles of sewers, and over 100 pump stations.

Table 3: Sewage Collection Agencies in Orange County within the Santa Ana Region (OCSD, 2000)

| City/Sanitation District | Population | Service Area | Gravity Sewers | Force Main | Pump Stations | |
|----------------------------|------------|----------------|-----------------------|------------|----------------------|--|
| | | Square Miles | Miles | Feet | No. | |
| | | | | | | |
| Anaheim | 328,000 | 49.76 | 503 | 0 | 0 | |
| Brea | 36,000 | 23.1 | 108.5 | 300 | 1 | |
| Buena Park | 78,280 | 10.29 | 250 | 0 | 0 | |
| Costa Mesa S.D. | 109,000 | 15.7 | 321 | 24813 | 20 | |
| Cypress | 49,600 | 7.2 | 87 | 2000 | 1 | |
| El Toro Water District | N/A | N/A | N/A | N/A | N/A | |
| Fountain Valley | 58,000 | 10 | 130 | 100 | 1 | |
| Fullerton | 127,000 | 22 | 283.5 | 0 | 0 | |
| Garden Grove | 165,196 | 17.8 | 327 | 9150 | 3 | |
| Huntington Beach | 201,000 | 28 | 580 | 34320 | 28 | |
| Irvine | See IRWD | | | | | |
| Irvine Ranch W.D. | 69728 | 123 | 515.05 | 79279 | 8 | |
| La Habra | 58,974 | 7.5 | 105.95 0 | | | |
| La Palma | 16400 | 2 | 25 | 0 | 0 | |
| Los Alamitos | See Rossmo | or | | | | |
| Midway City S.D. | 90,000 | 10.25 | 168 | | 4 | |
| Newport Beach | 70,000 | 24 | 210 | 106,000 | 20 | |
| Orange | 129,000 | 23 | 309 | 600 | 2 | |
| Placentia | 46,888 | 7 | 23 | 0 | 0 | |
| Los Alamitos/Rossmoor S.D. | 24,780 | 6.25 | 54 | 0 | 0 | |
| Santa Ana | 312,595 | 27 | 450 | 100 | 2 | |
| Seal Beach | 25,098 | 10.72 | 45 | 19,079 | 9 | |
| Stanton | 37,400 | 3 | 55 | 600 | 1 | |
| Sunset Beach S.D. | 4,000 | 0.25 | 2.67 | 750 | 2 | |
| Tustin | 68,316 | 12.59 | 51.52 | 0 | 0 | |
| Irvine Business Complex | 00,010 | .=.00 | 24.18 | 2,794 | 3 | |
| Villa Park | 6,782 | 2.1 | 30 | 250 | 1 | |
| Westminster | , - | See Midway Cit | | | | |
| Yorba Linda | 63,000 | 9.3 | 72.6 | 450 | 1 | |
| Yorba Linda W.D. | 54,376 | 11 | 138 | 529 | 1 | |
| Total | 2,317,620 | 463 | 4,869 | 281,114 | 108 | |

The OCSD's annual Operations and Maintenance Survey report provides information about the system components, number of sewage spills, money spent on O&M and capital improvement, and other factors. Although these reports provide a fairly good picture of each sewage collection system, there are differences in how each agency responded to the survey questions and differences in operations within each system that may skew any statistical analysis of the data. For example, some agencies report all sewage spills and others only report spills greater than 1,000 gallons. Some agencies do not report sewage spills at all. Some agencies report budget information as a total amount

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and others break down costs based on O & M, capital improvement, and pump station maintenance, as requested by the survey. However, the OCSD annual O&M survey results do provide basic information on overall performance of each sewer system and it could be used as a tool to identify areas that need improvement.

Table 4, below, summarizes the information on SSOs from the OCSD annual O&M survey. Only 8 sewage spills greater than 1,000 gallons and 150 SSOs less than 1,000 gallons were reported. The overall results are comparable to the ASCE survey results summarized in Table 2. Again this comparison may not be accurate as some of the collection agencies did not report any of the sewage spills in their jurisdiction

Table 4: Number of Sanitary Sewer Overflows during 2000 in Orange County (OCSD, 2000) (for Collection Systems Tributary to OCSD)

| OCSD) | | | | | | | | | |
|----------------------------------|----------------------|---------------|----------------------|---------------|------------------|--|--|--|--|
| City/Sanitation District | Sewage Spills | Sewage Spills | Sewage Spills | Sewage Spills | No. of Spills | | | | |
| | <500 gallons | 500-1000 gal. | 1,000-10,000 gal. | >10,000 gal. | per 100 mi. | | | | |
| | | | _ | | | | | | |
| Anaheim | 23 | 5 | 3 | 0 | 6.16 | | | | |
| Brea | 1 | 0 | 0 | 0 | 0.92 | | | | |
| Buena Park | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Costa Mesa S.D. | 14 | 0 | 2 | 0 | 4.98 | | | | |
| Cypress | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Fountain Valley | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Fullerton | 21 | 13 | 0 | 0 | 11.99 | | | | |
| Garden Grove | 15 | 3 | 1 | 0 | 5.81 | | | | |
| Huntington Beach | 7 | 3 | 0 | 0 | 1.72 | | | | |
| Irvine | | | | | | | | | |
| Irvine Ranch W.D. | 0 | 0 | 0 | 0 | 0.00 | | | | |
| La Habra | 3 | 0 | 0 | 0 | 2.83 | | | | |
| La Palma | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Los Alamitos | | W | | | | | | | |
| Midway City S.D. | 12 | 0 | 0 | 0 | 7.14 | | | | |
| Newport Beach | List not Provided | | | | | | | | |
| Orange | 8 | 0 | 0 | 0 | 2.59 | | | | |
| Placentia | 7 | 0 | 0 | 1 | 34.78 | | | | |
| Los Alamitos/Rossmoor S.D. | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Santa Ana | 9 | 0 | 0 | 0 | 2.00 | | | | |
| Seal Beach | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Stanton | 4 | 0 | 0 | 0 | 7.27 | | | | |
| Sunset Beach S.D. | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Tustin | 1 | 1 | 0 | 0 | 3.88 | | | | |
| Irvine Business Complex | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Villa Park | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Westminster | | | | | | | | | |
| Yorba Linda | 0 | 0 | 0 | 0 | 0.00 | | | | |
| Yorba Linda W.D. | 2 | 1 | 1 | 0 | 2.90 | | | | |
| Total/average | 127 | 26 | 7 | 1 | 3.80 | | | | |

Table 5, below, summarizes the budget information provided by the sewage collection agencies in the OCSD annual O&M survey. As shown in the table, not all agencies provided budget information and audits of a limited number of these agencies by staff indicated that some to the information listed in Table 5 is not accurate.

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Table 5 shows that the annual budgets for the sewer system ranges from \$1.19 to \$175 per person per year. The expenditures for operations and maintenance (O & M) and for capital improvement also vary significantly among these agencies. Comparing Table 5 with the number of sewage spills listed in Table 4 for each agency, there appears to be some correlation between the total amount spent per year on O&M and the number of sewage spills. However, due to the inaccuracies in the reporting format, these comparisons may be premature.

Summary of Budget Information for Sewage Collection Systems in Orange County (for systems tributary to OCSD). Table 5:

| | y to ocop | | | 1 | T | T | ı |
|--------------------------|------------|-----------|------------|-----------|------------------|----------|---------------|
| City/Sanitation District | | | | | Pump Station O&M | | |
| | \$/year | \$/year | \$/year | \$/Mile | \$/PS | \$/Mile | \$/Capita/yr. |
| Anaheim | 1845254.00 | | | 3668.50 | | 0.00 | 5.63 |
| Brea | 120000.00 | 10000.00 | 150000.00 | 1105.99 | 10000.00 | 1382.49 | 3.33 |
| Buena Park | 130000.00 | NA | 700000.00 | 520.00 | | 2800.00 | 1.66 |
| Costa Mesa S.D. | 1089700.00 | | | 3394.70 | 0.00 | 0.00 | 10.00 |
| Cypress | 136026.00 | | 50000.00 | 1563.52 | 0.00 | 574.71 | 2.74 |
| Fountain Valley | | | | | | | |
| Fullerton | 285054.00 | | | 1005.48 | | 0.00 | 2.24 |
| Garden Grove | 3859062.00 | | 995000.00 | 11801.41 | 0.00 | 3042.81 | 23.36 |
| Huntington Beach | 779645.00 | 461255.00 | 1648510.00 | 1344.22 | 16473.39 | 2842.26 | 3.88 |
| Irvine | | | | | | | |
| Irvine Ranch W.D. | 6004858.00 | | 1343479.00 | 11658.79 | 0.00 | 2608.44 | 86.12 |
| La Habra | 218868.00 | 0.00 | 507968.00 | 2065.77 | | 4794.41 | 3.71 |
| La Palma | 260000.00 | | | 10400.00 | | 0.00 | 15.85 |
| Los Alamitos | | | | | | | |
| Midway City S.D. | | | | | | | |
| Newport Beach | 212000.00 | 700000.00 | 550000.00 | 1009.52 | 35000.00 | 2619.05 | 3.03 |
| Orange | 188700.00 | | | 610.68 | 0.00 | 0.00 | 1.46 |
| Placentia | 60000.00 | | | 2608.70 | | 0.00 | 1.28 |
| Los Alamitos/Rossmoor | 70000.00 | 0.00 | 50000.00 | 1296.30 | | 925.93 | 2.82 |
| Santa Ana | 665855.00 | | 200000.00 | 1479.68 | 0.00 | 444.44 | 2.13 |
| Seal Beach | 351000.00 | | 1182500.00 | 7800.00 | 0.00 | 26277.78 | 13.99 |
| Stanton | 150000.00 | 10000.00 | 800000.00 | 2727.27 | | 14545.45 | 4.01 |
| Sunset Beach S.D. | 700000.00 | | | 262172.28 | 0.00 | 0.00 | 175.00 |
| Tustin | 113344.00 | | | 2200.00 | | 0.00 | 1.66 |
| Irvine Business Complex | 48748.00 | 56054.00 | 1354000.00 | 2016.05 | 18684.67 | 55996.69 | |
| Villa Park | 12500.00 | 4200.00 | 20000.00 | 416.67 | 4200.00 | 666.67 | 1.84 |
| Westminster | | | | | | | 0.00 |
| Yorba Linda | 119300.00 | 12000.00 | 0.00 | 1643.25 | 12000.00 | 0.00 | 1.89 |
| Yorba Linda W.D. | 64720.00 | | 181135.00 | 468.99 | 0.00 | 1312.57 | 1.19 |

NEED FOR GENERAL WASTE DISCHARGE REQUIREMENTS

SSOs may cause a nuisance, cause temporary exceedances of applicable water quality standards, pose a threat to the public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters. As discussed above, most of these SSOs are preventable with proper operation and maintenance of the collection systems. Regional Board staff's audit of a number of sewage collection agencies and the information in Tables 4 and 5, above, indicate that the sewage collection agencies' operation, maintenance, spill reporting procedures, and response to spills vary widely. In certain cases, significant improvements are needed to minimize these SSOs and their adverse impacts. The proposed General Waste Discharge Requirements (WDR) prescribes uniform minimum standards for the sewage collection agencies. By issuing a General WDR to all the collection agencies in Orange County, the requirements are uniformly applied without the administrative burden of issuing individual permits.

REGULATORY BASIS

The Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) prohibits the discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey storm water runoff to surface water streams (Basin Plan, Chapter 5, Implementation, Page 5-5). The California Water Code (Section 13260) and the Clean Water Act (Section 402) prohibits the discharge of pollutants to surface waters without a NPDES permit. This order implements the Basin Plan prohibition (no discharge to surface waters) and therefore, is not a NPDES permit. The Basin Plan prohibition is the basis for the requirements specified in this order.

REQUIREMENTS

The order requires the sewage collection agencies to develop and implement a Sewer System Management Plan (SSMP). The SSMP should include programs and policies the agency is proposing to address capacity, management, operation, maintenance, funding, and spill response. Since grease blockage has been identified as one of the major causes of SSOs, the sewage collection agencies are also required to implement a grease and fat source control program.

RECOMMENDATION

Staff recommends adoption of Order No. R8-2002-0014 as presented.